

**Abstract**

A *cis*-acting nucleotide sequence which is capable of rendering the removal of introns from a precursor transcript encoded by a gene, which gene harbors at least one such *cis*-acting nucleotide sequence, occurring during the production of mRNA of a gene, dependent upon activation of a *trans*-acting factor. The *trans*-acting factor is an RNA-activated protein kinase which is capable of phosphorylating the  $\alpha$ -subunit of eukaryotic initiation factor 2. The *trans*-acting factor may be preferably, the RNA-activated protein kinase (PKR). The *cis*-acting nucleotide sequence can be derived from the 3' untranslated region of the human tumor necrosis factor  $\alpha$  gene (TNF- $\alpha$  3'-UTR) and may comprise the nucleotide sequence as denoted by SEQ ID NO:1 or biologically functional fragments, derivatives, mutants and homologues thereof.